

## **REMARKS**

### **A. Background**

Claims 51-80 were pending in the application at the time of the Office Action with claims 61, 62 and 73 having been withdrawn. Claims 51-60, 63-72 and 74-80 were rejected as being obvious over cited art. By this response applicant has amended claims 51 and 70 and added new claims 81-90. As such, claims 51-90 are presented for the Examiner's consideration in light of the following remarks.

### **B. Proposed Claim Amendments**

Applicant has herein amended the drawings to add element identifiers. Applicant has herein amended the specification to provide antecedence support for the wording of the amendments to the claims. The amendments to the specification are supported at least by Figure 3.

Applicant has herein amended claims 51 and 70 and added new claims 81-90 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. For example, independent claims 51 and 70 have been amended to clarify that the apparatus includes a structure with a plurality of spaced apart openings that bound a compartment and that the hydrogen peroxide/water vapour passes through the plurality of openings within the structure to condense on an exterior surface of the flash evaporation chamber. Other clarifying amendments have also been made to claims 51 and 70. New dependent claims 81-90 add further limitations to the claimed methods. The amendments to the claims are supported throughout the application, and specifically at least by Figures 3 and 4 and the corresponding discussion in the specification as originally filed.

In view of the foregoing, applicant submits that the amendments to the drawings, specification, and claims do not introduce new matter and entry thereof is respectfully requested.

### **C. Rejections Based on 35 USC § 103**

#### **1. Rejections based on the combination of Curry and Watling**

Paragraphs 1 and 2 of the Office Action reject claims 51-53, 55, 59, 63, 65, 66, 70, and 74-80 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,480,615 to Curry ("Curry") in view of Great Britain Publication No. GB 2 354 443 to Watling ("Watling"). Applicant respectfully

traverses this rejection and submits that in light of amendments made herein, a *prima facie* case of obviousness cannot be maintained at least because the allegedly obvious combination would not include each and every limitation recited in the rejected claims. Of the rejected claims, claims 51 and 70 are independent claims.

Curry discloses a germicide diffuser used to vaporize and dispense a fluid germicide to sterilize a room and associated equipment. See Abstract. Curry discloses that the diffuser can be positioned within the room during disinfection of the room. As shown in Figure 4, Curry discloses a vapor generating means 14 that atomizes a fluid germicide and then distributes the vapor to a room to be disinfected by using a fan 16 to blow the fluid through conduits 28 to a diffuser pipe 18 (see Figure 2). As shown in Figures 1-3, Curry includes a closed cabinet 12 that completely bounds an inner compartment in which all of the active components of Curry, including the vapor generating means 14, the fan 16, and the conduits 28, are disposed. As shown in Figures 1-3, cabinet 12 has a front door to presumably access the components when not in use, but discloses no other openings or apertures into the inner compartment of the diffuser.

During use, *Curry* discloses that the germicide is atomized and then diffused into the room being sterilized. See col. 3, lines 39-50. The Office Action concedes that *Curry* fails to disclose using flash evaporation to introduce the sterilant as well as using hydrogen peroxide as the sterilant. See Office Action at page 3. The Office Action cites to *Watling* to attempt to remedy this shortcoming of *Curry*, asserting that *Watling* discloses “a method of decontaminating an enclosed space by flash evaporating ... a hydrogen peroxide/water vapor,” and referring to page 10, lines 5-30 of *Watling* in support. Office Action at page 4. Applicant notes that the *Watling* apparatus is an external sterilizing system in which all of the active sterilizing components remain outside of the room that is being sterilized.

Because the *Curry* apparatus discloses no openings through the cabinet except for a single access door, and because *Watling* does not cure this deficiency of *Curry*, Applicant submits that even if, *arguendo*, *Curry* and *Watling* were combined in the allegedly obvious combination set forth in the Office Action, the combination would not disclose or suggest a method of decontaminating an enclosed space that includes:

positioning an apparatus within an enclosed space having an atmosphere, the apparatus including a structure at least partially bounding a compartment, the structure having a plurality of spaced apart openings that communicate between the

compartment and the atmosphere within the enclosed space, a flash evaporator chamber being disposed within the compartment of the structure, the flash evaporator chamber having an exterior surface that is freely exposed to the atmosphere within the enclosed space by way of the plurality of spaced apart openings; [and] ...

progressively introducing hydrogen peroxide/water vapour into the recirculating heated airstream ... [such that] the hydrogen peroxide/water vapour pass[es] ... through the plurality of openings of the structure to condense on the exterior surface of the flash evaporation chamber,

as recited in amended claim 51, or:

positioning a portable decontamination apparatus within an enclosed space having an atmosphere, the decontamination apparatus including a structure at least partially bounding a compartment, the structure having a plurality of spaced apart openings that communicate between the compartment and the atmosphere within the enclosed space, a flash evaporator chamber being disposed within the compartment of the structure, the flash evaporator chamber having an exterior surface that is freely exposed to the atmosphere within the enclosed space by way of the plurality of spaced apart openings; [and] ...

operating the decontamination apparatus positioned within the enclosed space ... [such that] the hydrogen peroxide/water vapour pass[es] ... through the plurality of openings of the structure to condense on the exterior surface of the flash evaporation chamber,

as recited in amended claim 70.

Applicant further submits that it would not have been obvious to otherwise modify *Curry* to include the above limitation. Because hydrogen peroxide is very corrosive, conventional sterilization systems have sought to protect the sterilizing components by preventing the components from coming into contact with the hydrogen peroxide. This has typically been done by placing the sterilizing components outside of the enclosure to be sterilized, such as is done in the *Watling* reference. And while *Curry* may arguably disclose a sterilizing system that is able to be positioned within the enclosure to be sterilized, *Curry* does not disclose the type of sterilant to be used, as conceded by the Office Action. However, because conventional wisdom has been to protect the sterilizing components from caustic hydrogen peroxide, it is reasonable to assume that hydrogen peroxide was not the sterilant envisioned by *Curry* unless specifically stated otherwise.

And even if, *arguendo*, it would have been obvious to use hydrogen peroxide with the *Curry* device, one of skill in the art would have sought to protect the sterilizing components when doing so. As such, one of skill in the art would not have modified the *Curry* cabinet to include openings that

allow the sterilizing components to be freely exposed to the caustic hydrogen peroxide, as generally claimed.

In light of the above, Applicant submits that a *prima facie* case of obviousness has not been established regarding claims 51 and 70 at least because the allegedly obvious combination of *Curry* and *Watling* would not include every limitation recited in the rejected claims. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 51 and 70 be withdrawn.

Claims 52, 53, 55, 59, 63, 65, 66, and 74-80 each depend from either claim 51 or claim 70 and thus incorporate the limitations thereof. As such, applicant submits that claims 52, 53, 55, 59, 63, 65, 66, and 74-80 are also distinguished over the cited art for at least the same reasons as discussed above with regard to claims 51 and 70. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 52, 53, 55, 59, 63, 65, 66, and 74-80 also be withdrawn.

## 2. Rejections based on further cited art

Paragraphs 3-7 of the Office Action reject claims 54, 56-58, 60, 64, 67-69, 71, and 72 under 35 USC § 103(a) as being obvious over the allegedly obvious combination of *Curry* and *Watling* in view of various other references. Specifically, claims 54, 56, 57, 58, and 72 are rejected in view of PCT Patent Publication No. WO 00/74734 to *Watling* et al. (“*Watling* ‘734”); claim 56 is rejected in view of U.S. Patent No. 6,589,479 to *Dufresne* et al. (“*Dufresne*”); claim 60 is rejected in view of Great Britain Publication No. GB 2 360 454 to *Martin* (“*Martin*”); claims 64, 67, and 68 are rejected in view of U.S. Patent No. 5,173,258 to *Childers* (“*Childers*”); and claims 69 and 71 is rejected in view of U.S. Patent No. 4,244,712 to *Tongret* (“*Tongret*”). *Watling* ‘734 is merely cited for allegedly disclosing measuring the condensation in an enclosed space at a number of different locations by condensation and an airstream being passed through a rotating nozzle. *Dufresne* is merely cited for allegedly disclosing using biological indicators to determine when the predetermined concentration of hydrogen peroxide/water vapor in the atmosphere has been reached. *Martin* is merely cited for allegedly disclosing using a recited percentage of hydrogen peroxide solution. *Childers* is merely cited for allegedly disclosing using a heating/ventilation air conditioning system to remove the hydrogen peroxide and to dehumidify the atmosphere within the enclosure. *Tongret* is merely cited for allegedly disclosing using a filter for filtering air entering a duct.

Claims 54, 56-58, 60, 64, 67-69, 71, and 72 depend from claims 51 and 70 and thus incorporate the limitations thereof. Applicant submits that none of the cited references cure the deficiencies of *Curry* discussed above. That is, one of skill in the art would still not have found it obvious to modify *Curry* to include openings that allow the sterilizing components to be freely exposed to the caustic hydrogen peroxide, as generally claimed in the independent claims. As such, applicant submits that claims 54, 56-58, 60, 64, 67-69, 71, and 72 are distinguished over the cited art for at least the same reasons as discussed above with regard to claims 51 and 70. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 54, 56-58, 60, 64, 67-69, 71, and 72 be withdrawn.

No other objections or rejections are set forth in the Office Action.

D. New Claims

Applicant submits that new claims 81-90 are also distinguished over the cited art. For example, new claims 81 and 86 generally recite that the structure includes a front side and an opposing back side, each having an opening formed therethrough, the hydrogen peroxide/water vapour passing through the openings of the front and back sides of the structure to condense on the exterior surface of the flash evaporation chamber. Claims 82 and 87 generally recite that the structure also includes opposing lateral sides through which the hydrogen peroxide/water vapour passes to condense on the exterior surface of the flash evaporation chamber. Claims 83 and 88 generally recite further components disposed within the compartment, the further components having exterior surfaces that are also freely exposed to the atmosphere by way of the plurality of openings so that the hydrogen peroxide/water vapour passes through the openings to condense on the exterior surfaces of the further components. Claims 84 and 89 generally recite a control box disposed within the compartment, the control box having an exterior surface that is also freely exposed to the atmosphere by way of the plurality of openings so that the hydrogen peroxide/water vapour passes through the openings to condense on the exterior surface of the control box. Claims 85 and 90 generally recite that the control box also has an interior space and means for delivering the heated airstream through the interior space to condense on surfaces therein. Applicant respectfully submits that none of the cited combinations teach any of those limitations in conjunction with the rest of the limitations required by those claims.

Furthermore, claims 81-90 depend from claims 51 and 70 and thus incorporate the limitations thereof. As such, Applicant submits that claims 81-90 are distinguished over the cited references for at least the same reasons discussed above regarding claims 51 and 70.

E. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 51-60, 63-72 and 74-90 as amended and presented herein.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefor and charge any additional fees that may be required to Deposit Account No. 23-3178.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 6th day of May 2010.

Respectfully submitted,

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